

FFFFFFFFFF FFFF000000 000000 RRRRRRRR RRRRRRRR RRRRRRRR EEEEEEEEEE EEEEEEEEEE AAAA AAAA DDDDDDDD DDDDDDDD IIIIII 000000 000000
FFFFFFFFFF FFFF000000 000000 RRRRRRRR RRRRRRRR RRRRRRRR EEEEEEEEEE EEEEEEEEEE AAAA AAAA DDDDDDDD DDDDDDDD IIIIII 000000 000000
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FFFFFFFFFF 00 00 RRRRRRRR RRRRRRRR EEEEEEEE AA AA DD DD II II 00 00
FFFFFFFFFF 00 00 RRRRRRRR RRRRRRRR EEEEEEEE AA AA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AAAA AAAA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AAAA AAAA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FF 00 00 RR RR RR RR EE AA AA DD DD II II 00 00
FF 000000 RR RR RR RR RR EEEEEEEEEE AA AA DDDDDDDD DDDDDDDD IIIIII 000000
FF 000000 RR RR RR RR RR EEEEEEEEEE AA AA DDDDDDDD DDDDDDDD IIIIII 000000

(2)	56	HISTORY : Detailed Current Edit History
(3)	86	DECLARATIONS
(4)	134	FOR\$READ_IO - READ INTERNAL OBJECT-FORMATTED

0000 1 .TITLE FOR\$READ_IO - entry point for FORTRAN READ INTERNAL OBJECT-FORMATTED
0000 2 .IDENT /1-012/ File: FORREADIO.MAR Edit: JAW1012
0000 3 *****
0000 4 *
0000 5 *
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0000 23 *
0000 24 *
0000 25 *****
0000 26 *
0000 27 *
0000 28 ++
0000 29 :FACILITY: FORTRAN Support Library - user callable
0000 30 *
0000 31 :ABSTRACT:
0000 32 *
0000 33 : This module contains the entry point for the FORTRAN
0000 34 : READ INTERNAL OBJECT-FORMATTED I/O statement. It is simply
0000 35 : a call to FOR\$IO_BEG with bits in R0 which describe the
0000 36 : parameter list. FOR\$IO_BEG interprets the parameters.
0000 37 *
0000 38 :MAINTENANCE NOTE:
0000 39 : The transfer vector (RTLVECTOR+ALLLBL) must have the following:
0000 40 *
0000 41 :.TRANSFER FOR\$READ_IO
0000 42 :.MASK FOR\$IO_BEG
0000 43 :BRW FOR\$READ_IO+2
0000 44 *
0000 45 : This puts the correct mask in entry vector, that is FOR\$IO_BEG entry mask.
0000 46 : Furthermore this module must only use R0 and R1
0000 47 : since any other register might not be in the entry mask for FOR\$IO_BEG.
0000 48 *
0000 49 :ENVIRONMENT: User access mode; mixture of AST level or not
0000 50 *
0000 51 :AUTHOR: Richard B. Grove, CREATION DATE: 28-May-78
0000 52 *
0000 53 :MODIFIED BY:
0000 54 : T. Hastings, 29-July-78

0000 56 .SBTTL HISTORY ; Detailed Current Edit History
0000 57
0000 58
0000 59 : Edit History for Version 1
0000 60
0000 61 0-10 - Add comment about vectors. TNH 23-June-78
0000 62 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78
0000 63 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 64 1-002 - Change statement type symbols to be LUB\$K... JBS 07-DEC-78
0000 65 1-003 - Change statement type symbols to be ISB\$K... JBS 11-DEC-78
0000 66 1-004 - Add ^{A,,} to the PSELECT directive. JBS 22-DEC-78
0000 67 1-005 - Add FOR\$READ_KF, FOR\$READ_KO, FOR\$REWRITE_SF, FOR\$REWRITE_SO,
0000 68 FOR\$READ_IF, FOR\$READ_IO, FOR\$WRITE_IF, FOR\$WRITE_IO,
0000 69 FOR\$READ_KU, FOR\$REWRITE_SU,
0000 70 SBL 2-May-1979
0000 71 1-006 - Remove all entry points that need object time formatting,
0000 72 putting them in FORSENTRY_OBJ so that we can arrange to
0000 73 load the format compiler only when it is needed.
0000 74 JBS 26-JUN-1979
0000 75 1-007 - Remove entry point FOR\$ENCODE_MF; we will code a new module
0000 76 for it and FOR\$\$_IO_BEG, to see how much I/O initiation time
0000 77 improves. JBS 02-JUL-1979
0000 78 1-008 - Do likewise for FOR\$READ_DU and FOR\$WRITE_DU. JBS 03-JUL-1979
0000 79 1-009 - Remove all entry points and add FOR\$READ_IO; each entry
0000 80 point gets its own module so we can selectively load
0000 81 the necessary UDF and REC modules. JBS 09-JUL-1979
0000 82 1-010 - Correct a typo that caused a data truncation error. JBS 10-JUL-1979
0000 83 1-011 - New parameter format for FOR\$\$_IO_BEG. SBL 5-Dec-1979
0000 84 1-012 - Change BRW FOR\$\$_IO_BEG+2 to JMP G^FOR\$\$_IO_BEG+2. JAW 21-Feb-1981

```
0000 86 .SBTTL DECLARATIONS
0000 87
0000 88 ; INCLUDE FILES:
0000 89
0000 90 ;
0000 91
0000 92     $FORPAR           ; Define inter-module FORTRAN symbols
0000 93     $ISBDEF           ; Define statement type symbols
0000 94
0000 95 ; EXTERNAL SYMBOLS:
0000 96
0000 97 ;
0000 98
0000 99     .DSABL  GBL           ; Declare all external symbols
0000 100    .EXTRN  FOR$IO_BEG      ; common I/O statement processing
0000 101    ;+
0000 102    ; The following references are to make sure the necessary UDF and REC
0000 103    ; modules are loaded. These are the routines which are called through
0000 104    ; the dispatch tables in FOR$DISPAT.
0000 105    ;-
0000 106    .EXTRN  FOR$UDF_RF0, FOR$UDF_RF1, FOR$UDF_RF9
0000 107    .EXTRN  FOR$REC_RIF0, FOR$REC_RIF1, FOR$REC_RIF9
0000 108    ;+
0000 109    ; The following reference makes sure the format compiler is loaded.
0000 110    ;-
0000 111    .EXTRN  FOR$FMT_COMPIL
0000 112
0000 113 ; MACROS:
0000 114
0000 115 ; NONE
0000 116
0000 117
0000 118 ; PSECT DECLARATIONS:
0000 119
0000 120
0000 121    .PSECT  _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 122
0000 123 ; EQUATED SYMBOLS:
0000 124
0000 125
0000 126
0000 127
0000 128 ; OWN STORAGE:
0000 129
0000 130 ; NONE
0000 131
0000 132 ;
```

0000 134 .SBTTL FOR\$READ_IO - READ INTERNAL OBJECT-FORMATTED
0000 135
0000 136 ++
0000 137 : FUNCTIONAL DESCRIPTION:
0000 138
0000 139 Initialize the FORTRAN I/O system to perform
0000 140 a READ INTERNAL OBJECT-FORMATTED I/O statement.
0000 141
0000 142 : CALLING SEQUENCE:
0000 143
0000 144 CALL FOR\$READ_IO (user_vbl.rt.dx, format_adr.rt.r
0000 145 [, err_adr.j.r [, end_adr.j.r]])
0000 146
0000 147 : INPUT PARAMETERS:
0000 148
0000 149 user_vbl.rt.dx User's string variable
0000 150 format_adr.rt.r format string (needs compilation)
0000 151 [err_adr.j.r] optional ERR= address
0000 152 [end_adr.j.r] optional END= address
0000 153
0000 154 : IMPLICIT INPUTS:
0000 155
0000 156 NONE except those used by FOR\$IO_BEG.
0000 157
0000 158 : OUTPUT PARAMETERS:
0000 159
0000 160 NONE
0000 161
0000 162 : IMPLICIT OUTPUTS:
0000 163
0000 164 NONE except those left by FOR\$IO_BEG.
0000 165
0000 166 : COMPLETION CODES:
0000 167
0000 168 NONE
0000 169
0000 170 : SIDE EFFECTS:
0000 171
0000 172 NONE except those of FOR\$IO_BEG.
0000 173
0000 174 :--
0000 175
0000 176 FOR\$READ_IO::: MASK FOR\$IO_BEG
50 0112 8F 0000 177 MOVZWL #ISBK ST TY_RIF+
0000 3C 0002 178 <1@FOR\$V OBJ-FMT>, R0 : Statement type
0000 0007 179 JMP G^FOR\$IO_BEG+2 ; branch past call mask
0000 000D 180
0000 000D 181
0000 000D 182 .END

00000002'GF 17

FOR\$READ_I0
Symbol table

I 3
- entry point for FORTRAN READ INTERNAL 15-SEP-1984 23:57:13 VAX/VMS Macro V04-00
6-SEP-1984 10:59:11 [FORRTL.SRC]FORREADIO.MAR;1 Page 5 (4)

FOR\$SFMT_COMPIL
FOR\$IO_BEG
FOR\$REC_RIF0
FOR\$REC_RIF1
FOR\$REC_RIF9
FOR\$UDF_RFO
FOR\$UDF_RF1
FOR\$UDF_RF9
FOR\$READ_I0
FOR\$V_OBJ_FMT
ISBSK_ST_TY_RIF

***** X 00
00000000 RG 01
= 00000008
= 00000012

+-----+
! Psect synopsis !
+-----+

PSECT name

PSECT name	Allocation	PSECT No.	Attributes	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
. ABS	00000000	(0.)	00 (0.)	NOPIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT
_FOR\$CODE	0000000D	(13.)	01 (1.)	PIC	USR	CON	CON	SHR	EXE	RD	NOVEC	LONG

+-----+
! Performance indicators !
+-----+

Phase

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.10	00:00:00.91
Command processing	119	00:00:00.59	00:00:02.83
Pass 1	124	00:00:01.28	00:00:04.88
Symbol table sort	0	00:00:00.18	00:00:00.61
Pass 2	47	00:00:00.48	00:00:01.56
Symbol table output	3	00:00:00.01	00:00:00.20
Psect synopsis output	2	00:00:00.02	00:00:00.05
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	327	00:00:02.67	00:00:11.04

The working set limit was 1050 pages.

6711 bytes (14 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 188 non-local and 0 local symbols.

182 source lines were read in Pass 1, producing 8 object records in Pass 2.

9 pages of virtual memory were used to define 2 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

\$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB;1
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2
TOTALS (all libraries)

Macros defined

2
0
2

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

FOR\$READ_10
VAX-11 Macro Run Statistics

- entry point for FORTRAN READ INTERNAL J 3 15-SEP-1984 23:57:13 VAX/VMS Macro V04-00
6-SEP-1984 10:59:11 [FORRTL.SRC]FORREADIO.MAR;1 Page 6 (4)

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LI\$:\$FORREADIO/OBJ=OBJ\$:\$FORREADIO MSRC\$:\$FORREADIO/UPDATE=(ENH\$:\$FORREADIO)+LI

0183 AH-BT13A-SE
VAX/VMS V4.0

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LIS

FORREWSO
LIS

FORREADSN
LIS

FORSECONDS
LIS

FORREADOU
LIS

FORREADSU
LIS

FORREADIL
LIS

FORREADKF
LIS

FORREWSF
LIS

FORREADKU
LIS

FORREADSL
LIS FORREADSO
LIS